




Features

- Size: 4 mm diameter, 4.2 mm length
- Mini-surface mount footprint
- Low capacitance
- High insulation resistance
- RoHS compliant*
-  UL Recognized

Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

2053 Series Light Duty 2-Electrode Miniature Gas Discharge Tube

Characteristics

Test Methods per ITU-T K.12 and IEC 61643-311.

| Characteristic | Model No. | | | | |
|-----------------------------------|-----------|---------|---------|---------|---------|
| | 2053-07 | 2053-09 | 2053-14 | 2053-23 | 2053-25 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 75 V | 90 V | 145 V | 230 V | 250 V |
| Impulse Sparkover ⁽¹⁾ | | | | | |
| 100V/ μ s | < 700 V | < 700 V | < 700 V | < 600 V | < 600 V |
| 1000V/ μ s | < 800 V | < 800 V | < 800 V | < 700 V | < 700 V |

| Characteristic | Model No. | | | | |
|-----------------------------------|-----------|---------|---------|---------|----------|
| | 2053-30 | 2053-35 | 2053-40 | 2053-47 | 2053-60 |
| DC Sparkover $\pm 20\%$ @ 100 V/s | 300 V | 350 V | 400 V | 470 V | 600 V |
| Impulse Sparkover ⁽¹⁾ | | | | | |
| 100V/ μ s | < 600 V | < 650 V | < 700 V | < 800 V | < 900 V |
| 1000V/ μ s | < 700 V | < 800 V | < 800 V | < 900 V | < 1000 V |

⁽¹⁾ Impulse Sparkover voltage is defined as typical values of distribution.

| | | |
|---|-----------------------------|----------------|
| Insulation Resistance (IR) ⁽²⁾ | 50/100/250 V | > 1 G Ω |
| Glow Voltage | 10 mA | ~ 70 V |
| Arc Voltage | >1 A | ~ 10 V |
| Glow-Arc Transition Current | | < 1 A |
| Capacitance..... | 1 MHz | 0.5 pF typical |
| Maximum Impulse Discharge Current | 5,000 A, 8/20 μ s..... | 1 operation |
| | 3,000 A, 8/20 μ s..... | 10 operations |
| Nominal Alternating Discharge Current | 3 A, 50 Hz, 1 second..... | 1 operation |
| | 6 A, 9 cycles..... | 1 operation |
| Impulse Life | 100 A, 10/1000 μ s..... | 300 operations |
| DC Holdover Voltage ⁽³⁾ | | < 150 ms |
| Operating Temperature..... | | -40 to +85 °C |
| Storage Temperature..... | | -40 to +115 °C |
| Climatic Category (IEC 60068-1)..... | | 40/90/21 |

Notes:

- UL Recognized component, UL File E153537.
- At delivery AQL 0.65 Level II, DIN ISO 2859.
- Bourns recommends reflowing surface mount devices per IPC/JEDEC J-STD-020 rev D.

| | |
|-------------------------------------|----------------------|
| ⁽²⁾ DC Sparkover Voltage | DC Measuring Voltage |
| 75–90 V | 50 V |
| 120–400 V | 100 V |
| 470–600 V | 250 V |

| | |
|--------------------------------|---------------------|
| ⁽³⁾ Network Applied | DC Holdover Voltage |
| DC Sparkover Voltage | |
| 75–145 V | 52 V |
| 230–250 V | 80 V |
| 300–600 V | 150 V |



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

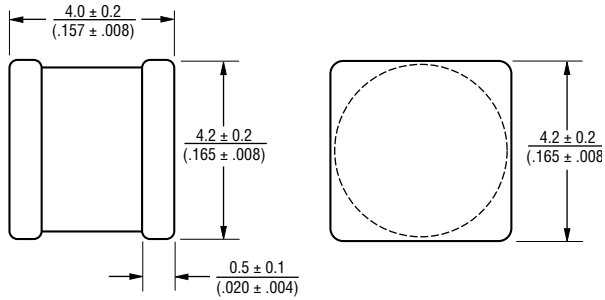
Users should verify actual device performance in their specific applications.

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2053 Series Light Duty 2-Electrode Miniature Gas Discharge Tube



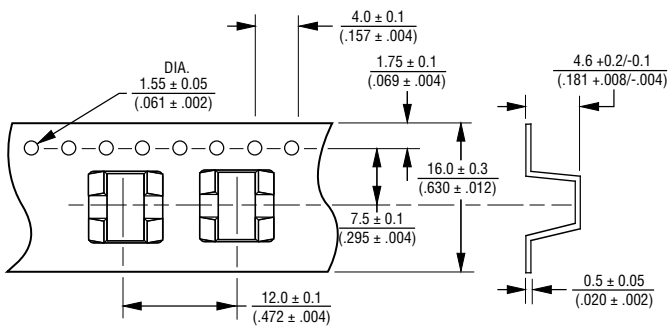
Product Dimensions



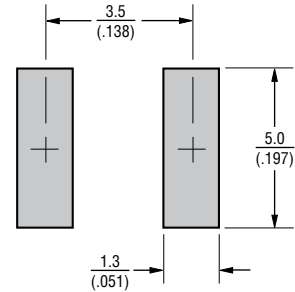
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Packaging Specifications

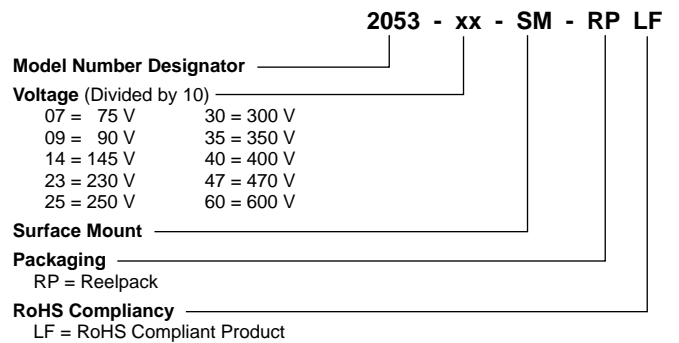
The Model 2053-xx-SM ships standard reelpack (-RP), 900 pieces per reel, 2,700 pieces per box. Reel is 330 mm in diameter and 16 mm wide.



Recommended Pad Layout



How to Order



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